



This is an official
DHEC Health Advisory

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**Notice to Health Care Providers:
Shiga Toxin-producing *E. coli* cases**

The South Carolina Department of Health and Environmental Control (DHEC) is requesting heightened surveillance for persons presenting with symptoms consistent with Shiga toxin-producing *E. coli* (STEC) (i.e., enterohemorrhagic *E. coli*), including diarrhea that is often bloody, hemolytic uremic syndrome (HUS) in children or thrombocytopenia purpura in adults.

Summary

DHEC is investigating a cluster of *E. coli* O157 infections and hemolytic uremic syndrome (HUS) cases that have been identified in the Upstate Region. Investigations are ongoing to determine the source (or sources) of infection.

Guidance for Clinicians

Symptoms

DHEC recommends a high index of suspicion for STEC infection for patients presenting with STEC symptoms.

Clinical syndromes associated with a Shiga toxin producing *E. coli* infection include:

- Gastroenteritis with diarrhea and abdominal cramps (fever and bloody stools may or may not be present), and/or
- Hemolytic uremic syndrome (HUS) with or without gastroenteritis, which typically develops a week after the onset of diarrhea.

Hemolytic uremic syndrome (HUS) is characterized by the triad of acute onset of microangiopathic hemolytic anemia, renal injury, and low platelet count. Most cases of HUS occur after an acute gastrointestinal illness (usually diarrheal).

Management

Management of STEC is typically non-specific supportive therapy, including hydration. The CDC recommends that antibiotics should not be used to treat this infection. There is no evidence that treatment with antibiotics is helpful, and taking antibiotics may increase the risk of HUS. Antidiarrheal agents like Imodium® may also increase that risk.

Testing

- All stools submitted for testing from patients with acute community-acquired diarrhea should be cultured for STEC O157:H7. These stools should be simultaneously assayed for non-O157 STEC with a test that detects the Shiga toxins or the genes encoding these toxins.
- **Clinical laboratories should report and send *E. coli* O157:H7 isolates and Shiga toxin-positive samples to the SC DHEC Bureau of Laboratories (BOL) as soon as possible for additional characterization.**
- Specimens or enrichment broths in which Shiga toxin or STEC are detected but from which O157:H7 STEC isolates are not recovered should be forwarded as soon as possible to the SC DHEC BOL so that non-O157:H7 STEC can be isolated.
- It is often difficult to isolate STEC in stool by the time a patient presents with HUS. Immunomagnetic separation (IMS) has been shown to increase recovery of STEC from HUS patients. For any patient with HUS without a culture-confirmed STEC infection, stool can be sent to the SC DHEC BOL for IMS or to the CDC (through the BOL). In addition, serum can be sent to CDC (through the BOL) for serologic testing of common STEC serogroups.

The benefits of adhering to the recommended testing strategy include early diagnosis, improved patient outcome, and detection of all STEC serotypes.

Reporting of Cases

Cases of bloody diarrhea or a clinical presentation consistent with STEC should be reported to state or local health departments via the phone numbers listed below. DHEC will arrange for collection of stool samples for testing, as appropriate.

Any laboratory confirmed acute case associated with Shiga toxin producing *E. coli* or *E. coli* identified as serogroup O157:H7 should be reported within 24 hours to DHEC, as per the current DHEC List of Reportable Conditions.

Resources for Additional Information

- CDC *E. coli* General Information (<http://www.cdc.gov/ecoli/general/index.html#what-are-shiga-toxin>)
- MMWR – “Recommendations for Diagnosis of Shiga Toxin–Producing *Escherichia coli* Infections by Clinical Laboratories” (www.cdc.gov/mmwr/PDF/rr/rr5812.pdf)
- FoodSafety.gov (<http://www.foodsafety.gov/poisoning/causes/bacteriaviruses/ecoli/>)

DHEC contact information for reportable diseases and reporting requirements

Reporting of confirmed and suspected Shiga Toxin-producing *E. coli* cases is consistent with South Carolina Law requiring the reporting of diseases and conditions to your state or local public health department. (State Law # 44-29-10 and Regulation # 61-20) as per the DHEC 2011 List of Reportable Conditions available at: <http://www.scdhec.gov/administration/library/CR-009025.pdf>

Federal HIPAA legislation allows disclosure of protected health information, without consent of the individual, to public health authorities to collect and receive such information for the purpose of preventing or controlling disease. (HIPAA 45 CFR §164.512).

Regional Public Health Offices – 2015

Mail or call reports to the Epidemiology Office in each Public Health Region.

LOW COUNTRY PUBLIC HEALTH REGION

Berkeley, Charleston, Dorchester
4050 Bridge View Drive, Suite 600
N. Charleston, SC 29405
Phone: (843) 953-0043
Fax: (843) 953-0051
Nights / Weekends: (843) 441-1091

Beaufort, Colleton, Hampton, Jasper
219 S. Lemacks Street
Walterboro, SC 29488
Phone: (843) 549-1516
Fax: (843) 549-6845
Nights / Weekends: (843) 441-1091

Allendale, Bamberg, Calhoun, Orangeburg
932 Holly Street
Holly Hill, SC 29059
Phone: (803) 300-2270
Fax: (843) 549-6845
Nights / Weekends: (843) 441-1091

MIDLANDS PUBLIC HEALTH REGION

Kershaw, Lexington, Newberry, Richland
2000 Hampton Street
Columbia, SC 29204
Phone: (803) 576-2749
Fax: (803) 576-2993
Nights / Weekends: (888) 801-1046

Chester, Fairfield, Lancaster, York
PO Box 817
1833 Pageland Highway
Lancaster, SC 29720
Phone: (803) 286-9948
Fax: (803) 286-5418
Nights / Weekends: (888) 801-1046

Aiken, Barnwell, Edgefield, Saluda
222 Beaufort Street, NE
Aiken, SC 29801
Phone: (803) 642-1618
Fax: (803) 643-8386
Nights / Weekends: (888) 801-1046

PEE DEE PUBLIC HEALTH REGION

Chesterfield, Darlington, Dillon, Florence, Marlboro, Marion
145 E. Cheves Street
Florence, SC 29506
Phone: (843) 661-4830
Fax: (843) 661-4859
Nights / Weekends: (843) 915-8845

Clarendon, Lee, Sumter
PO Box 1628
105 North Magnolia Street
Sumter, SC 29150
Phone: (803) 773-5511
Fax: (803) 775-9941
Nights/Weekends: (843) 915-8845

Georgetown, Horry, Williamsburg
1931 Industrial Park Road
Conway, SC 29526-5482
Phone: (843) 915-8804
Fax: (843) 915-6502
Nights/Weekends: (843) 915-8845

UPSTATE PUBLIC HEALTH REGION

Anderson, Oconee
220 McGee Road
Anderson, SC 29625
Phone: (864) 260-5801
Fax: (864) 260-5623
Nights / Weekends: (866) 298-4442

Abbeville, Greenwood, Laurens, McCormick
1736 S. Main Street
Greenwood, SC 29646
Phone: (864) 227-5947
Fax: (864) 953-6313
Nights / Weekends: (866) 298-4442

Cherokee, Greenville, Pickens
PO Box 2507
200 University Ridge
Greenville, SC 29602-2507
Phone: (864) 372-3133
Fax: (864) 282-4373
Nights / Weekends: (866) 298-4442

UPSTATE PUBLIC HEALTH REGION (continued)

Spartanburg, Union
PO Box 2507
200 University Ridge
Greenville, SC 29602-2507
Phone: (864) 372-3133
Fax: (864) 282-4373
Nights / Weekends: (866) 298-4442

DHEC Bureau of Disease Control Division of Acute Disease Epidemiology

1751 Calhoun Street
Box 101106
Columbia, SC 29211
Phone: (803) 898-0861
Fax: (803) 898-0897
Nights / Weekends: 1-888-847-0902



www.scdhec.gov

Categories of Health Alert messages:

Health Alert	Conveys the highest level of importance; warrants immediate action or attention.
Health Advisory	Provides important information for a specific incident or situation; may not require immediate action.
Health Update	Provides updated information regarding an incident or situation; unlikely to require immediate action.
HAN Info Service	Provides general public health information; unlikely to require immediate action.